

Committee on Vital and Health Statistics
Data Standards and Security Subcommittee
December 14, 2001

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Committee on Vital and Health Statistics Data Standards and Security Subcommittee

1. Ongoing CDC and public health activities
2. National Electronic Disease Surveillance System initiative and use of standards
3. Implications of October 4th and subsequent BT attacks for public health
– clinical systems data exchange

Committee on Vital and Health Statistics Data Standards and Security Subcommittee

- Public health needs timely access to well structured care data - PMRI standards
- National Center for Health Statistics (NCHS) - population health data
- CDC's missions to protect the public by:
 - minimizing infectious, chronic diseases and injury
 - preventing environmental exposures and workplace injuries
 - promoting healthy behaviorswill benefit tremendously from interoperable systems (clinical and public health) and more comparable data

Prior to October 4th

- Examples of the benefits of PH use of clinical system data:
 - Electronic Laboratory Reporting (HL7 2.3 Public Health Message with LOINC and SNOMED)
 - HMO data extractions
 - Some hospital specific examples of data exchange
- Offers less provider burden, broader coverage of reportable cases, more data about each case, more timely delivery
- But...
 - Many vocabulary issues
 - Implementations not broadly applicable / exchangeable
 - Further needs for meta data to allow for the descriptive presentation of data for efficient retrieval and analysis

Prior to October 4th

- In process of redeveloping national surveillance infrastructure -> National Electronic Disease Surveillance System (NEDSS)
- Not “a software system”, but a vision and a process to:
 1. Integrate diverse PH systems – many program stovepipes
 2. Connect to clinical data systems
 3. Use and promote national standards for data and systems
- Systems architecture, specific use of national data standards
- Funding for 50 states and several large municipalities

National Electronic Disease Surveillance System (NEDSS)

NEDSS Use of National Data Standards

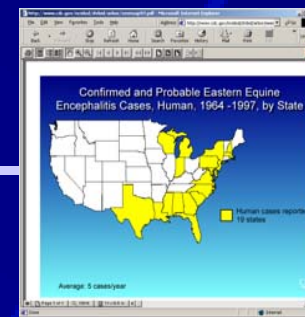
- HL7 2.3 public health lab message
- HL7 Reference Information Model and supplement of Public Health Conceptual Data Model
 - data storage
 - messaging
- HL7 Version 3.0 Public Health Notification messages
- Commitment to participate with PH partners in SDO's
- LOINC, SNOMED, ICD and others (North American Industry Classification System (NAICS), the Bureau of Labor Statistics Standard Occupational Class (SOC) codes, and various ISO codes)



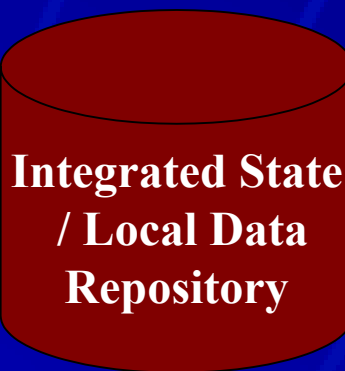
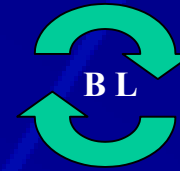
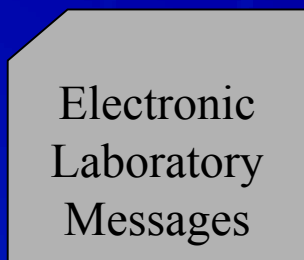
Local Health
Department
Or
Clinical
Site



State
Health
Department

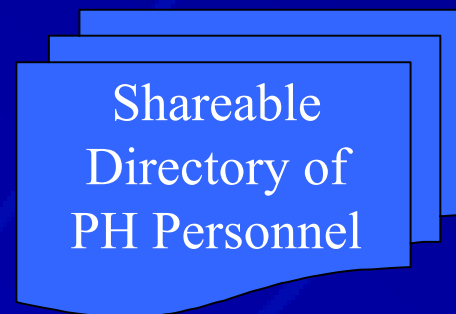


Reporting,
GIS and
Analysis



Security

XML
Data
Exchange



CDC and Other
Health Depts.

NEDSS Systems Architecture
For State and local Public Health
Departments

Prior to October 4th

Bioterrorism surveillance

- Investigation of Bioterrorism surveillance
- “Heightened” – manual data entry in ED’s around major events
- Some syndromic data – with follow-up
- Multi-data source - clinical, drug, OTC, absenteeism, 911 calls, etc.
- BT infrastructure should not be separate from non-BT

October 4th

- Anthrax attack was not executed as many expected, many lessons learned
 - Single case
 - Focal, not disseminated
 - Acute clinician
 - Single case
 - Identification was not syndromic
- Major CDC response
 - Suspect case management
 - Heightened surveillance
 - Adverse events from prophylaxis
 - Mail handling protocols

After October 4th

- Bioterrorism detection is still investigational
- Needs for case data management exchange and communication are not
- Increased priority / opportunity to get clinical data
 - Demographic data
 - Presenting complaint and syndromic data
 - Laboratory order and diagnostic study requests and results
 - Admission and discharge data
 - Utilization data
 - Other clinical data
- Clinical community and vendors expressing interest in helping

After October 4th

NEDSS Architecture:

Secure, inter-organizational exchange of Public Health data using Internet transport

- HL7 2.3 and version 3.0 messages
- ebXML (now OASIS managed) wrapper
- SOAP (Simple Object Access Protocol) web service
- PKI based encryption and HTTPS transport
- Security Assertion Markup Language (SAML)?

Identification of clinical care providers for communications from state, local health departments and federal agencies

- Sharable directories of public health participants, clinical providers
- LDAP
- LDIF

